

## **Project Description**

The Flex Casita is a 745 sf detached ADU with a flexible floorplan and multiple siting options. Suitable for a variety of family sizes, the Flex Casita includes two bedrooms and one bathroom and is designed with accessibility in mind. The two bedrooms do not share a wall in order to enhance privacy. There is an option for the second bedroom that opens off of the living room for use as a den/guest room or home office. Large windows illuminate an open living, dining, and kitchen space with a vaulted ceiling that creates an airy, spacious-feeling interior in this compact casita. The design creates privacy for casita and primary house residents through thoughtful window placement and the creation of a semi-private side yard that works in various configurations on the site.

## **Project Narrative**

The Flex Casita is designed to meet the needs of a variety of residents. With two bedrooms, this casita is suitable for a family with children and has ample storage in the attic and in cleverly placed closets to suit a busy family lifestyle. This casita is also well-suited for aging residents who would appreciate the single-floor living and perhaps proximity to relatives in the primary residence.

For greater flexibility, the plan has an option for the second bedroom to open directly into the living room with a pocket door. This floor plan variation creates a wonderful open flow between the main living space and this second bedroom, which would be perfectly configured for use as a den or home office.

The Flex Casita is designed for accessibility so that all residents and visitors will feel at home and be able to navigate the casita easily and comfortably. The casita offers single-floor living with the option for an accessible entry. All fixtures are designed to meet the clearances specified by the Fair Housing Act. For example, the generous bathroom layout can be simply adapted to accommodate people in wheelchairs and the laundry closet is conveniently designed without a door swing to maximize access.

The Flex Casita is designed with energy-efficient all-electric appliances while the roof is solar-ready with dedicated solar zones to provide enough solar energy to meet all electric use. This casita has been designed with a cool roof, sufficient insulation and energy efficient windows to meet the most stringent energy codes, yielding a comfortable interior temperature with minimal energy loss from heating and cooling. Operable windows throughout enable cross-ventilation to take advantage of cool Tucson nights during the summer, reducing reliance on air conditioning. The plumbing fixtures are low flow to for water efficiency in the desert environment.

The architectural style of the Flex Casita evokes the Craftsman bungalow style present in some older Tucson neighborhoods and uses a stucco exterior with wood details to harmonize with prevalent Tucson materials. The aesthetic of the casita is inviting and homey with a covered

front door and large front windows. This casita design could also be adapted to a variety of other exterior styles, such as Territorial Revival or Desert Modern.

The construction of the Flex Casita uses standard-size dimensional lumber and field-constructed trusses as well as commonly installed stucco finish. The number of materials and systems required is limited to simplify construction. Vertical heights are set to minimize cutting and waste of material. The full construction documents are on hand and ready for preapproval if this casita is selected for Tucson's model plan library.

The Flex Casita design can fit on a lot in several ways depending on the desired level of privacy, degree of connection to the primary house, and lot depth. See the diagrams for an overview of three options. This built-in optionality makes the Flex Casita adaptable to a variety of site contexts and intended uses.





# Flex Casita

**Tucson Model Plan Competition**

September 18, 2023



# A Flexible, Family-Friendly Floor Plan

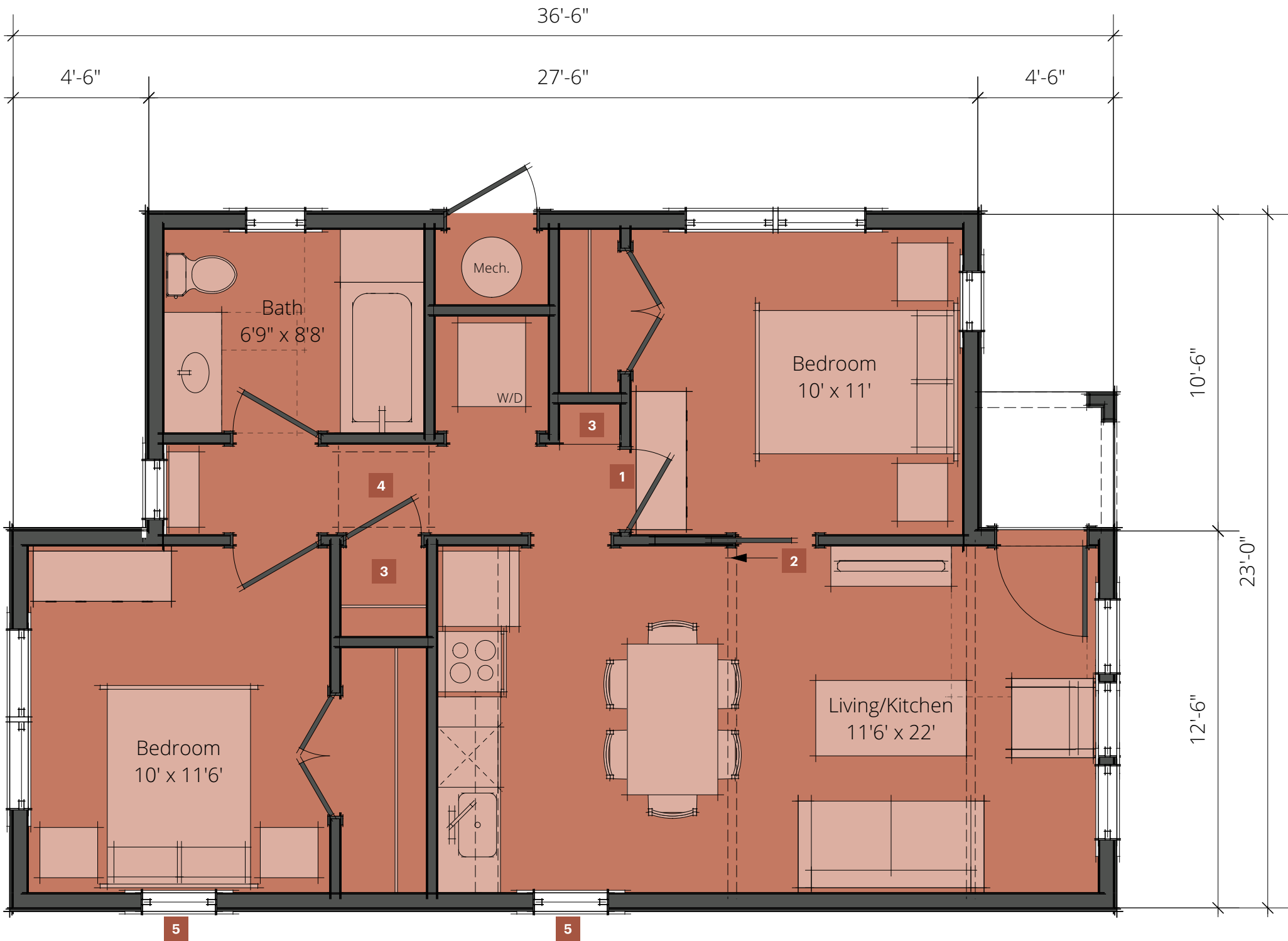
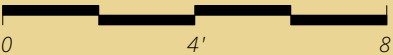
The Flex Casita is designed to meet the needs of a variety of residents. With two bedrooms, this casita is suitable for **a family with children** and has **ample storage** in the attic and in cleverly placed closets to suit a busy family lifestyle. This casita is also well-suited for **aging residents** who would appreciate the single-floor living and perhaps proximity to relatives in the primary residence.

For greater **flexibility**, the plan has an option for the second bedroom to open **directly into the living room** with a pocket door. This floor plan variation creates a wonderful open flow between the main living space and this second bedroom, which would be perfectly configured for use as a **den or home office**.

## Drawing Key Notes

- 1 Door option 1 in second bedroom
- 2 Door option 2 in second bedroom (conductive to home office or den)
- 3 Storage closet and shelf in hallway
- 4 Overhead hatch access to attic storage
- 5 Privacy windows allow light and ventilation while maintaining privacy between casita and main house

Scale: 1/4"=1'-0"







## Interior Perspective

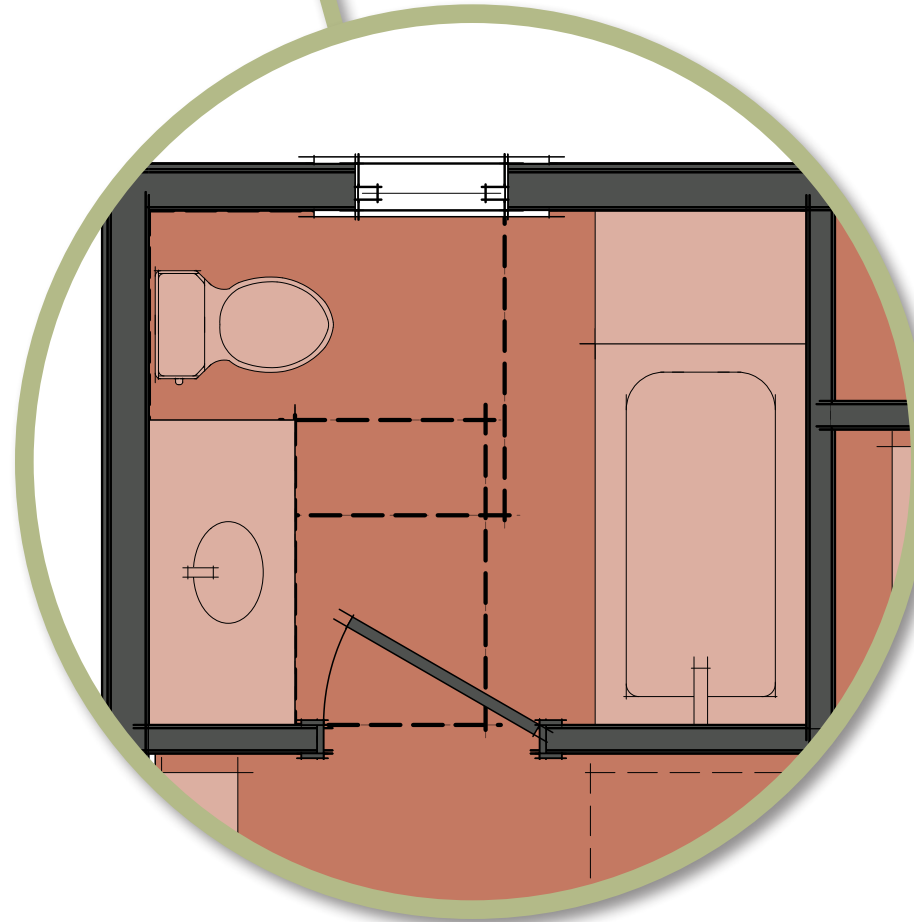
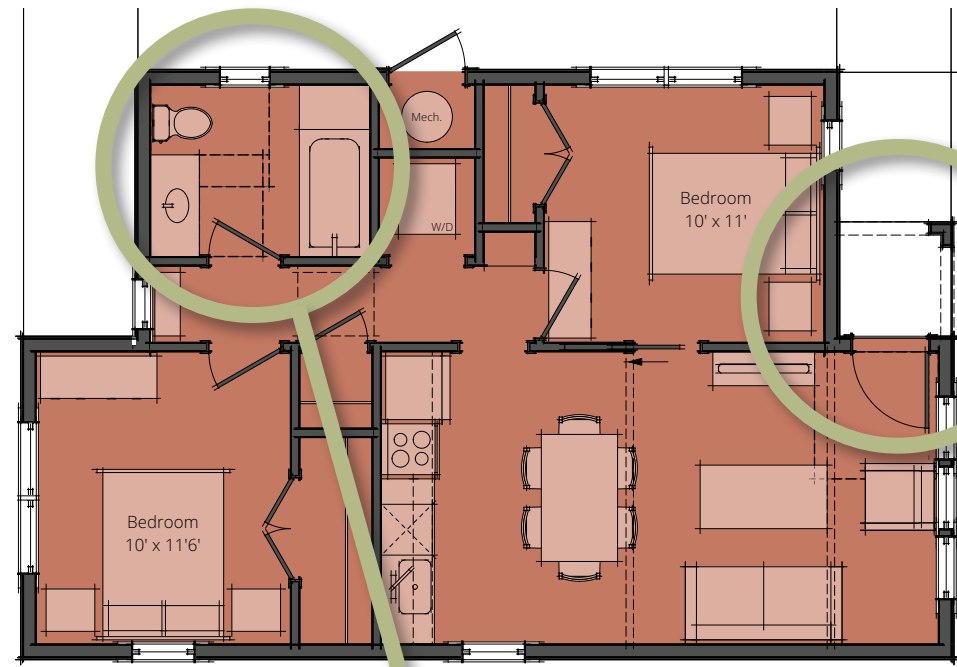
The spacious **open plan** includes kitchen, dining, and living under a **vaulted ceiling**, providing **generous space for gathering** despite the compact square footage.



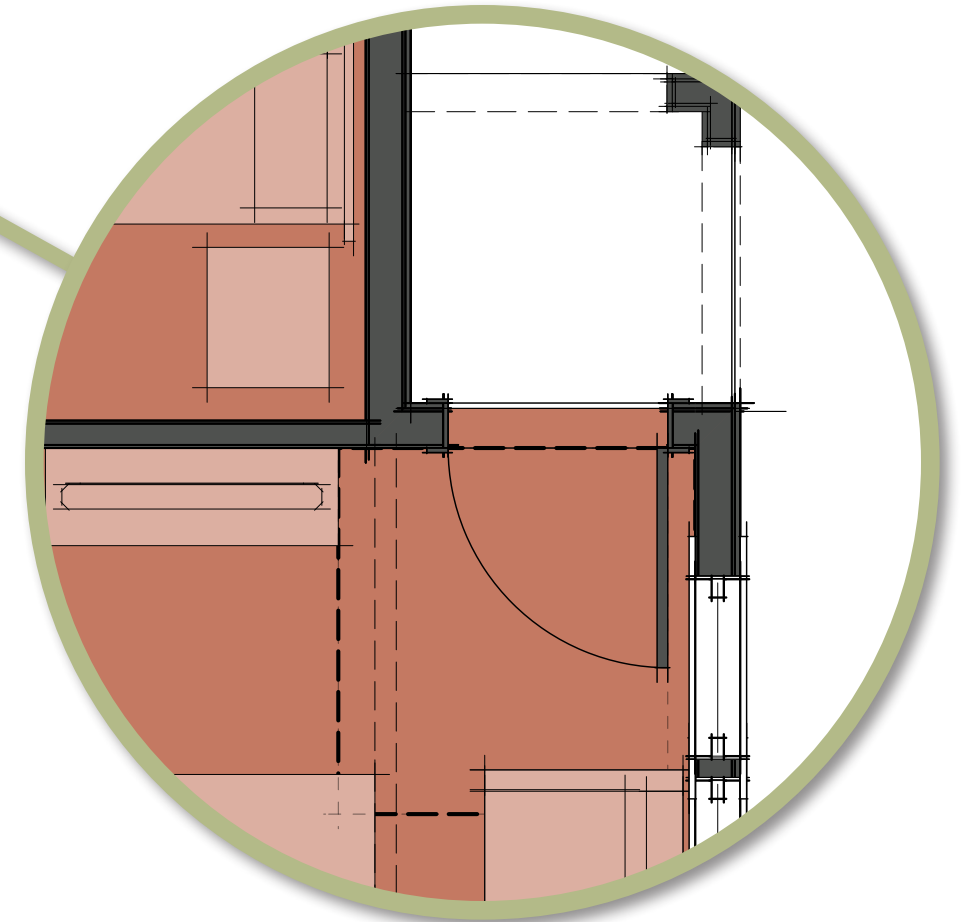
## Designed for Accessibility

The Flex Casita is designed for accessibility so that all residents and visitors will feel at home and be able to **navigate the casita easily and comfortably**. The casita offers single-floor living with the **option for an accessible entry**.

All fixtures are designed to meet the clearances specified by the Fair Housing Act. For example, the **generous bathroom layout** can be simply adapted to accommodate people in wheelchairs and the laundry closet is conveniently designed without a door swing to **maximize access**.



The bathroom is designed with clearances for fixtures (shown in dashed lines) so that it is easily adaptable for people in wheelchairs.



The floor level is set just enough above grade for drainage while easily accommodating a sloped entry that does not require ramp access.



# A Resource-Efficient and Climate-Adaptive Casita

The Flex Casita is designed with **energy-efficient all-electric appliances** while the roof is solar-ready with **dedicated solar zones** to provide enough solar energy to meet all electric use. This casita has been designed with a **cool roof**, sufficient insulation and energy efficient windows to meet the most stringent energy codes, yielding a comfortable interior temperature with **minimal energy loss** from heating and cooling. Operable windows throughout enable cross-ventilation to take advantage of cool Tucson nights during the summer, reducing reliance on air conditioning. The plumbing fixtures are **low flow for water efficiency** in the desert environment.

## Drawing Key Notes

- 1 Cool roof
- 2 Dedicated solar zone on roof
- 3 Deep eaves for shading
- 4 Energy-efficient windows





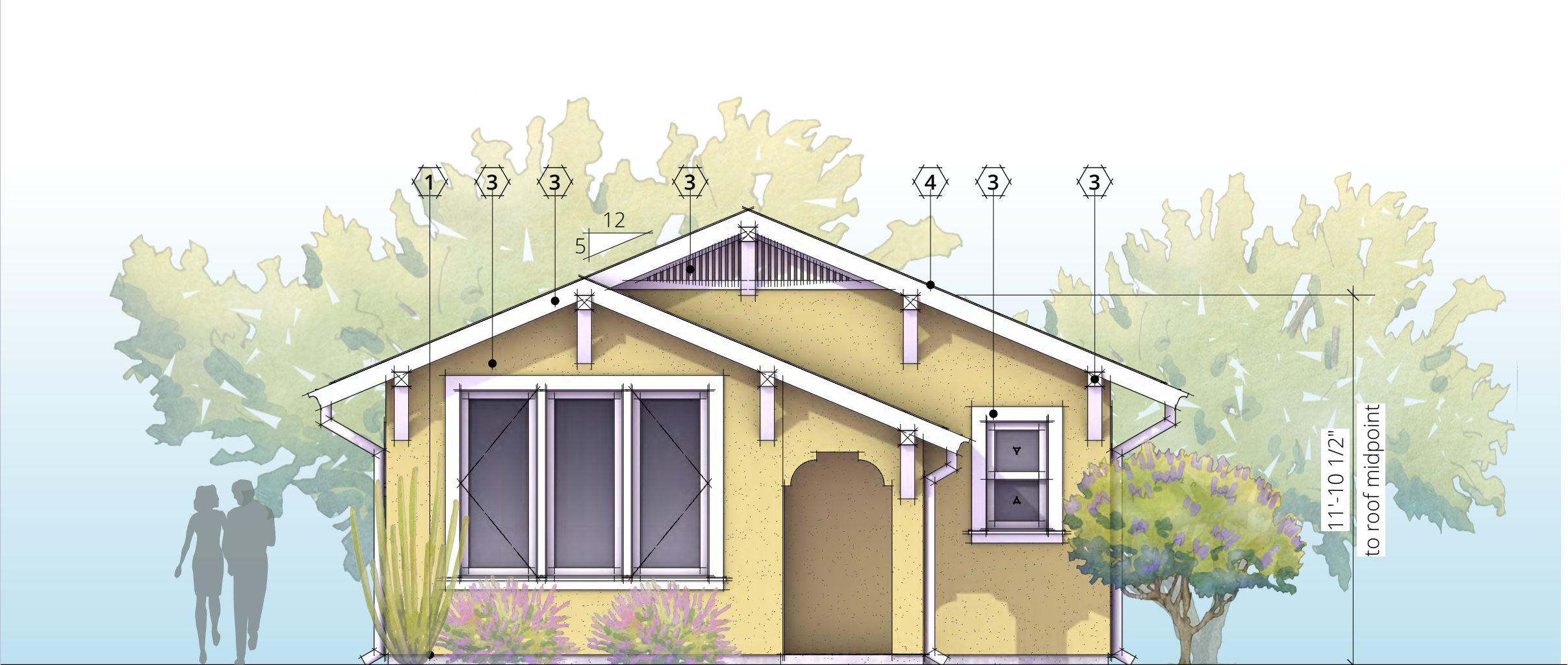
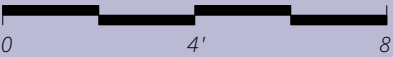
# Craftsman Bungalow Style Celebrates Cozy Casita Living

The aesthetic of the casita is **inviting and homey** with a covered front entry and large front windows. This casita design could also be adapted to a variety of other exterior styles, such as Territorial Revival or Desert Modern.

## Drawing Key Notes

- 1 Poured concrete slab
- 2 Stucco exterior finish
- 3 Wood trim
- 4 Composite shingle to cool roof standards
- 5 Dedicated solar zone area (shown in dashed line)

Scale: 1/4"=1'-0"





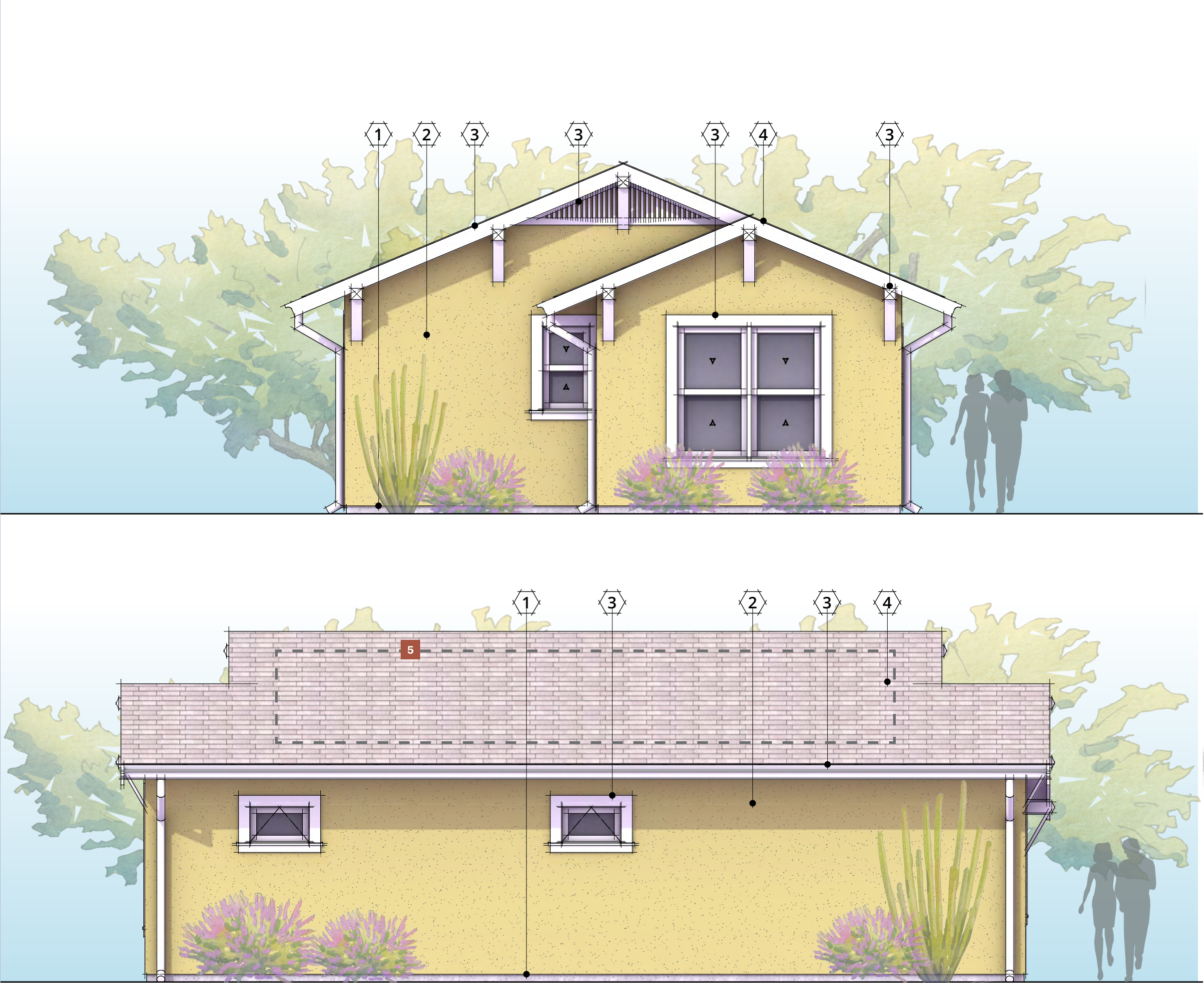
# Craftsman Bungalow Style Celebrates Cozy Casita Living

The **architectural style** of the Flex Casita evokes the Craftsman bungalow style present in some older Tucson neighborhoods and uses a stucco exterior with wood details to **harmonize with prevalent Tucson materials**.

## Drawing Key Notes

- 1 Poured concrete slab
- 2 Stucco exterior finish
- 3 Wood trim
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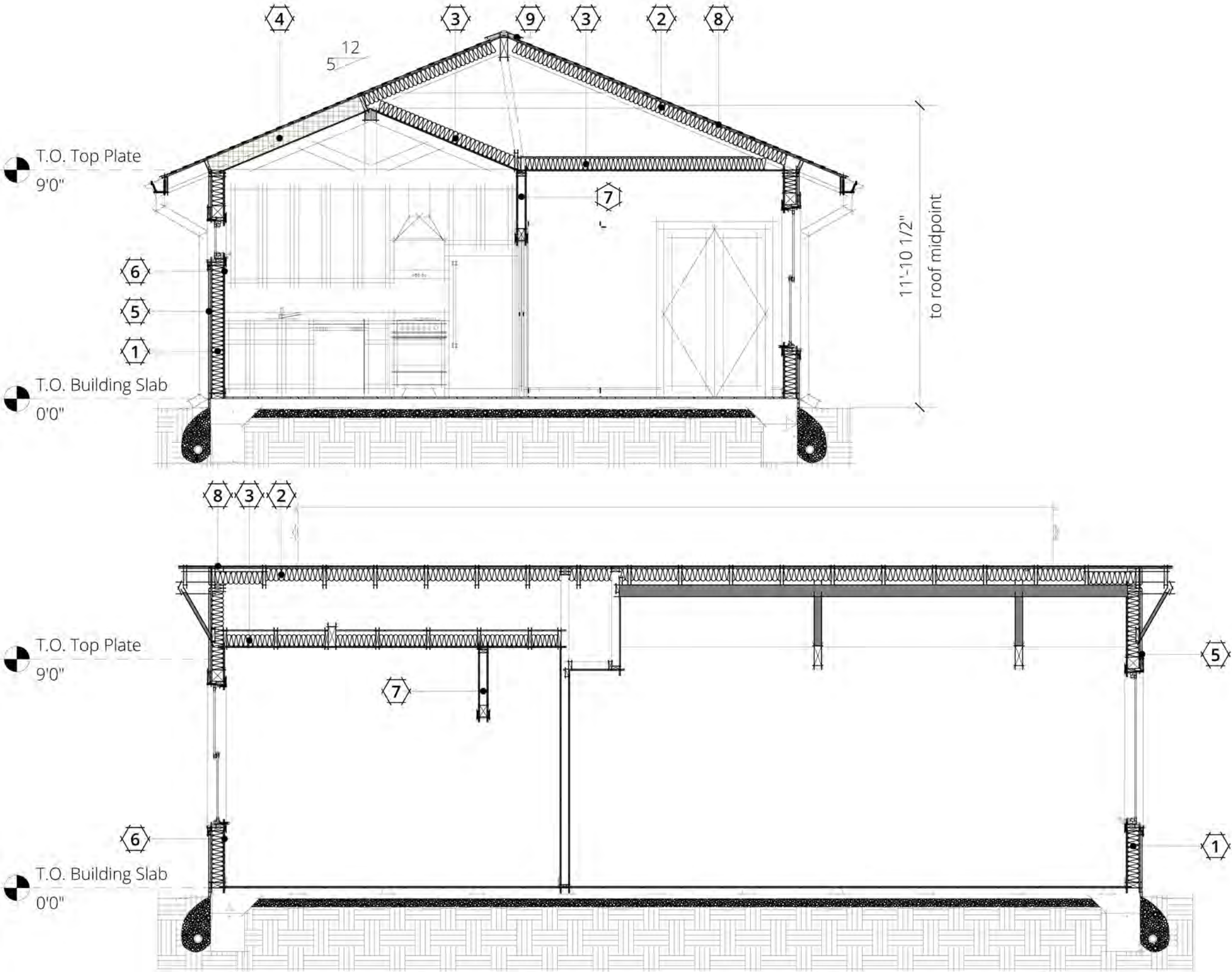
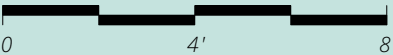
# Simple to Construct with Readily Available, Local Materials

The construction of the Flex Casita uses **standard-size dimensional lumber** and field-constructed trusses as well as commonly installed stucco finish. The number of materials and systems required is limited to **simplify construction**. Vertical heights are set to **minimize cutting and waste of material**. The full construction documents are on hand if this casita is selected for Tucson’s model plan library.

## Drawing Key Notes

- 1 Wall insulation, R-21
- 2 Roof insulation, R-21
- 3 Ceiling insulation, R-21
- 4 Closed cell spray foam insulation, R-38
- 5 Stucco system: 7/8" cement plaster over type "D" building paper over sheathing over 2x6 stud wall
- 6 Interior finish: 1/2" gypsum board
- 7 Interior wall: 2x4 stud wall
- 8 Roofing system: cool roof comp shingle over waterproofing membrane over sheathing over rafters
- 9 Rolled ridge vent

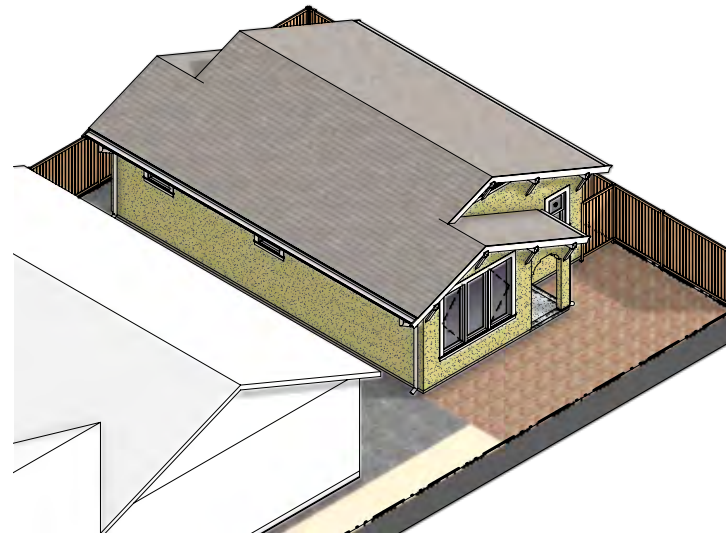
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# Options for Siting to Fit the Context

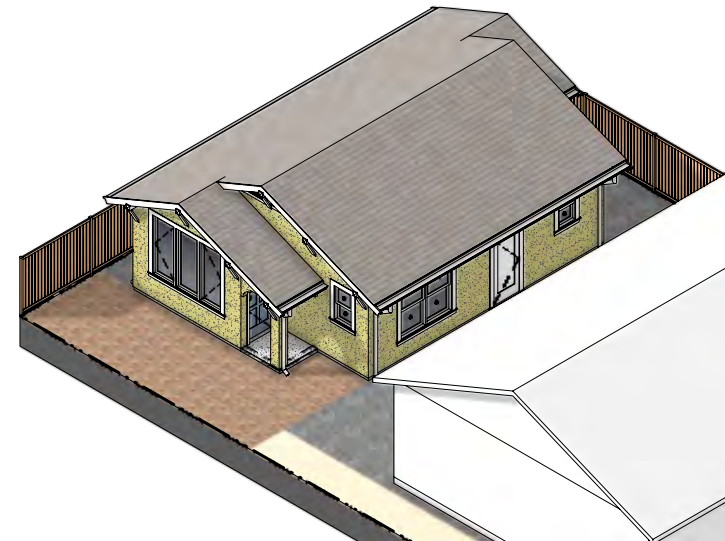
The Flex Casita design **can fit on a lot in several ways** depending on the desired level of privacy, degree of connection to the primary house, and lot depth. See the diagrams for an overview of three options. This **built-in optionality** makes the Flex Casita adaptable to a **variety of site contexts and intended uses**.



## Option A: Maximize privacy for the casita resident(s)

The casita's front door opens onto a **semi-private side yard** for the casita resident to use. The side of the casita that faces the house has small clerestory windows to preserve privacy for the casita resident(s)—and for the resident(s) of the primary house.

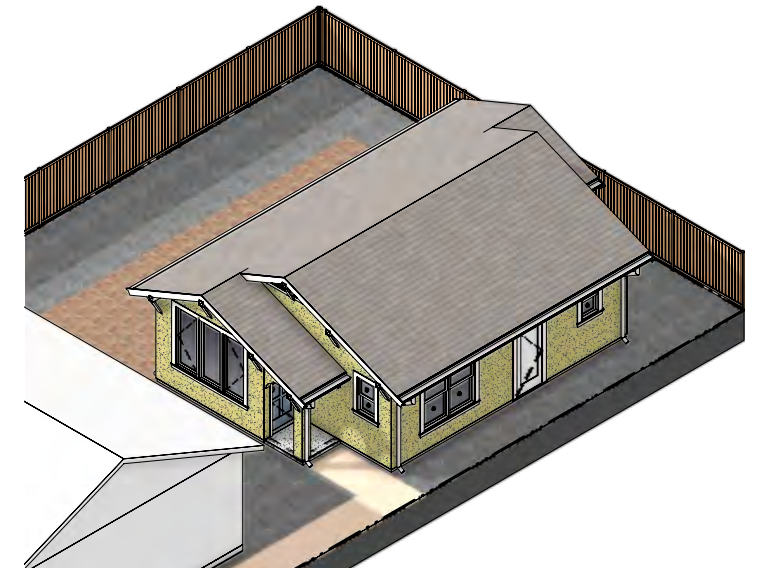
**You might choose this option if** you're planning to rent the casita to a tenant and want to **enhance privacy** between the primary house and casita.



## Option B: Maximize connection between the casita and primary house

The casita's **front door opens towards the backyard** and the primary house. The side of the casita that faces the house includes full-sized windows that open into one of the bedrooms.

**You might choose this option if** you're planning for **friends or family** to live in the casita and want a greater connection between the casita and the primary house.



## Option C: Orient perpendicular to primary house

The short side of the casita faces the primary house and a **side yard is preserved** for the entire depth of the lot. This option will only be possible for unusually deep lots.

**You might choose this option if** you have a **very deep lot** and want to preserve a large side yard.